

## Dr.ANANTH N

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### Qualification

Degree	Branch	Institution / University	Year of Passing
Ph.D.	Physics	Bharathidasan University	2017
M.Phil.	Physics	Bharathidasan University	2011
M.Sc.	Physics	Bharathidasan University	2008
B.Sc	Physics	Bharathidasan University	2006

### Ph.D. Details

Title of Thesis		Area of Specialization	
Detection of entanglement in bipartite states and non-k-separability in multipartite states		Quantum information theory	
Research Supervisor	Research Centre	Year of Award	
Dr. M. Senthilvelan	Centre for Nonlinear Dynamics, School of Physics, Bharathidasan University, Trichy	April 2017	

### Work Experience

Name of Institution	Address of Institution	Designation	From	To
Chidambaram Pillai College for Women	Mannachanallur, Tiruchirappalli - 621005	Assistant Professor	01/09/2016	31/03/2017
Bharathidasan University	School of Physics, Bharathidasan University, Tiruchirappalli - 620024	Project Assistant	04/05/2011	20/04/2013
Bishop Heber College		Assistant Professor	13/06/2017	Till date
Indian Institute of Technology Bombay	Department of Earth Sciences, Indian Institute of Technology Bombay, Mumbai – 400076	Junior Research Fellow	28/08/2008	12/03/2009

**Teaching / Research Experience****U.G. :** 55 Month**P.G. :**

55 Months

**M.Phil.**

24 Months

**Ph.D.****Research Guidance****U.G. :** 20**P.G. :**

8

**M.Phil. :**

2

**Ph.D. :****Table of Contents**

1.	<b>Conferences / workshops / Seminars Attended</b>	18
2.	<b>Research Papers Presented</b>	11
3.	<b>Publication in Journals</b>	6
4.	<b>Publication in Books</b>	0
5.	<b>Books Published / Edited</b>	0
6.	<b>Conferences / Workshops / Seminars Organised</b>	6
7.	<b>Research Projects</b>	1
8.	<b>Resource Person</b>	2
9.	<b>Consultancy</b>	0
10.	<b>Awards Recieved</b>	0
11.	<b>Patent</b>	0
12.	<b>Extension Activities Undertaken</b>	0
13.	<b>Professional Membership</b>	0
14.	<b>M.Phil. / Ph.D. Produced</b>	2 / 0

1. International level Conference on **"International Conference on Application of Basic Sciences"** sponsored by Bishop Heber College organized by Bishop Heber College at Tiruchirappalli during 19/11/2019 to 21/11/2019.
2. International level Conference on **"Indo-UK second international conference on Advanced Nanomaterials for Energy, Environment and Healthcare applications"** sponsored by PG & Research Department of Physics, Bishop Heber College organized by PG & Research Department of Physics, Bishop Heber College at Tiruchirappalli during 04/02/2019 to 06/02/2019.
3. College level Orientation on **"Faculty Improvement Programme on Experimental Physics"** sponsored by DBT organized by PG & Research Department of Physics at Bishop Heber College, Trichy during 12/02/2018 to 13/02/2018.
4. International level Conference on **"International Conference on Material Physics (ICOMP-2018)"** sponsored by PG & Research Department of Physics organized by PG & Research Department of Physics at Bishop Heber College during 29/01/2018 to 01/01/1900.
5. College level Orientation on **"CAPACITY BUILDING PROGRAMME"** sponsored by Bishop Heber College organized by IQAC, Bishop Heber College at Manikandam, Trichy during 14/07/2017 to 15/07/2017.
6. College level Orientation on **"Faculty Empowerment Programme"** sponsored by IQAC, Bishop Heber College organized by IQAC, Bishop Heber College at Tiruchirappalli during 14/06/2017 to 14/06/2017.
7. National level Workshop on **"Resources and Technologies for Scholarly Information"** sponsored by Bharathidasan University Library organized by Bharathidasan University Library at Bharathidasan University, Trichy during 12/08/2014 to 12/08/2014.
8. National level Workshop on **"National Colloquium on Theoretical Physics"** sponsored by Srinivasa Ramanujan Institute for Basic Sciences organized by Srinivasa Ramanujan Institute for Basic Sciences at Kottaym, Kerala during 09/08/2013 to 11/08/2013.
9. National level Refresher on **"Science Academies Refresher Course in Quantum Mechanics"** sponsored by IAS, INSA, NAS organized by St. Berchmans College at Kottaym, Kerala during 01/05/2013 to 14/05/2013.
10. International level Conference on **"International School and Conference on Quantum Information Processing and Applications"** sponsored by Harish-Chandra Research Institute organized by Harish-Chandra Research Institute at Allahabad during 14/02/2011 to 20/02/2011.
11. International level Workshop on **"Workshop on Quantum Chaos and Quantum Information"** sponsored by Indian Institute of Technology Madras organized by Indian Institute of Technology Madras at Chennai during 21/07/2010 to 24/07/2010.
12. International level Conference on **"International Conference on Quantum Systems, Classical Measurements and Consequences"** sponsored by S-VYASA University organized by S-VYASA University at Bangalore during 25/06/2010 to 30/06/2010.
13. National level Workshop on **"National Workshop on Quantum Entanglement"** sponsored by Pondicherry University organized by Pondicherry University at Puducherry during 17/02/2010 to 19/02/2010.
14. Regional level Seminar on **"Special Lecture Series on Theoretical Physics"** sponsored by Jamal Mohamed College organized by Jamal Mohamed College at Tiruchirappalli during 10/02/2010 to 12/02/2010.
15. National level Seminar on **"National Seminar on Crystal Growth of Non-Linear Optical Material"** sponsored by National College organized by National College at Tiruchirappalli during 03/03/2008 to 04/03/2008.
16. National level Workshop on **"Eighth Planex workshop"** sponsored by PRL, Ahmedabad organized by Pondicherry University at Puducherry during 24/12/2007 to 28/12/2007.

17. Regional level Orientation on **"Research Orientation Programme for Entrants"** sponsored by National Institute of Technology organized by National Institute of Technology at Tiruchirappalli during 08/08/2007 to 09/08/2007.
18. State level Summer School on **"SUMMER TRAINING PROGRAMME IN PHYSICS (STPIP 2007)"** sponsored by Department of Nuclear Physics, University of Madras organized by Department of Nuclear Physics, University of Madras at Chennai during 21/05/2007 to 16/06/2007.



1. **"Weak measurement effects on dynamics of quantum correlations in a Two-atom system in thermal reservoirs"** in the International conference on *CTP Quantum Information Days Workshop* sponsored by , organized by Center for Theoretical Physics, Polish Academy of Sciences, Warsaw at Poland during 22/02/2021 to 24/02/2021.
2. **"Influence of Nano TiO<sub>2</sub> as Ceramic Additives in P(VdF-HFP)-PVAc Based Flexible Composite Solid Polymer Electrolytes for Li-ion Battery Applications"** in the National conference on *National Conference on Advanced Functional Materials (NCFAM-2020)* sponsored by UGC, organized by National College at Tiruchirappalli during 13/02/2020 to 01/01/1900.
3. **"SYNTHESIS AND CHARACTERIZATION OF CUBIC STRUCTURED BATIO<sub>3</sub> NANOPARTICLES VIA HYDROTHERMAL METHOD FOR ANTIBACTERIAL APPLICATIONS"** in the International conference on *India-UK second international conference on Advanced Nanomaterials for Energy, Environment and Healthcare applications* sponsored by , organized by PG & Research Department of Physics, Bishop Heber College at Tiruchirappalli during 04/02/2019 to 06/02/2019.
4. **"Identifying biseparability of multipartite states using concurrence"** in the International conference on *International conference on Material Physics (ICOMP-2018)* sponsored by , organized by PG & Research Department of Physics at Bishop Heber College, Trichy during 29/01/2018 to 29/01/2018.
5. **"Identifying biseparability of multipartite states using concurrence"** in the International conference on *International conference on Material Physics (ICOMP-2018)* sponsored by , organized by PG & Research Department of Physics at Bishop Heber College, Trichy during 29/01/2018 to 29/01/2018.
6. **"A criterion for non-k-separability in n-partite quantum states"** in the International conference on *Young Quantum – 2015* sponsored by , organized by Harish-Chandra Research Institute at Allahabad during 24/02/2015 to 26/02/2015.
7. **"On the biseparability of multipartite states"** in the International conference on *International Program on Quantum Information* sponsored by , organized by Institute of Physics at Bhubaneswar during 17/02/2014 to 28/02/2014.
8. **"On the k-separability of multipartite states"** in the International conference on *Meeting on Quantum Information Processing and Applications* sponsored by , organized by Harish-Chandra Research Institute at Allahabad during 02/12/2013 to 08/12/2013.
9. **"Separability criteria of k-separable n-partite quantum states"** in the International conference on *13th Asian Quantum Information Science Conference* sponsored by , organized by The Institute of Mathematical Sciences at Chennai during 25/08/2013 to 30/08/2013.
10. **"On the separability conditions of bipartite states with non-Hermitian operators"** in the International conference on *International Workshop on Quantum Information* sponsored by , organized by Harish-Chandra Research Institute at Allahabad during 20/02/2012 to 26/02/2012.
11. **"Growth and Characterization of Chalcone organic nonlinear optical single crystal"** in the Regional conference on *UGC – Sponsored Regional seminar on Crystal Growth and Nanoscience* sponsored by UGC, organized by Department of Physics, Aditanar College of Arts and Science at Tiruchendur during 30/08/2007 to 01/09/2007.



1. **"Fabrication of BaTiO<sub>3</sub> ceramic filler incorporated PVC-PEMA based blend nanocomposite gel polymer electrolytes for Li ion battery applications"** published in J. Mater. Sci.: Mater. Electron. (PEER REVIEW) Vol. 30, Issue No. 17181, August 2019 ISSN : 0957-4522.
2. **"Investigation of antimicrobial activity of CTAB assisted hydrothermally derived Nano BaTiO<sub>3</sub>"** published in Material Research Express (PEER REVIEW) Vol. 6, Issue No. 025408, November 2018 ISSN : ---.
3. **"On the non-k-separability of Dicke class of states and N-qudit W states"** published in International Journal of Theoretical Physics (PEER REVIEW) Vol. 55, Issue No. , January 2016 ISSN : ---.
4. **"Identifying non-k-separability of a class of N-qubit complete graph states using correlation tensors"** published in The European Physical Journal D (SELECT) Vol. 70, Issue No. 149, January 2016 ISSN : ---.
5. **"On the separability criterion of bipartite states with certain non-Hermitian operators"** published in International Journal of Theoretical Physics (PEER REVIEW) Vol. 54, Issue No. 2632-2643, January 2015 ISSN : ---.
6. **"Criteria for non-k-separability of n-partite quantum states"** published in The European Physical Journal D (PEER REVIEW) Vol. 69, Issue No. 56, January 2015 ISSN : ---.

## Conferences / Workshops / Seminars Organised

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1. State level Workshop Entitled **"Faculty Development Programme on Problem Solving in Quantum Physics"** at PG & Research Department of Physics, Bishop Heber College, Tiruchirappalli, sponsored by Bishop Heber College, during 23/07/2021 to 24/07/2021.
2. National level Workshop Entitled **"A Two day National Workshop on Recent Advances in Materials for Multidisciplinary Applications"** at PG & Research Department of Physics, Bishop Heber College, Tiruchirappalli, sponsored by Bishop Heber College, during 30/03/2021 to 31/03/2021.
3. National level Workshop Entitled **"An Online Training Program for CSIR-NET Exam in Physical Sciences"** at PG & Research Department of Physics, Bishop Heber College, sponsored by Bishop Heber College, during 02/06/2020 to 05/06/2020.
4. College level Workshop Entitled **"Faculty Development Programme on Problem Solving in Physics"** at PG & Research Department of Physics, Bishop Heber College, sponsored by DBT, during 06/06/2019 to 08/06/2019.
5. State level Workshop Entitled **"Lecture workshop on Theoretical Physics"** at PG & Research Department of Physics, Bishop Heber College, sponsored by , during 27/11/2018 to 28/11/2018.
6. College level Seminar Entitled **"Faculty Enrichment Programme"** at PG & Research Department of Physics, Bishop Heber College, sponsored by DBT, during 19/11/2018 to 20/11/2018.

## RESEARCH PROJECTS - 1

1. Minor project entitled **"Quantifying quantum correlations based on quantum coherence measures"** (*PRINCIPAL INVESTIGATOR*), Sponsored by Bishop Heber College, during 01/10/2019 to 3/20/2020 [Completed].

## TRAINING PROGRAMME - 7

- # NATIONAL level FDP on **"Online Faculty Development Programme"** Sponsored by , Organized by Loyola College of Arts and Science at Namakkal during 11/05/2020 - 16/05/2020.
- # COLLEGE level FDP on **"Faculty Development Programme on Problem Solving in Physics"** Sponsored by DBT, Organized by PG & Research Department of Physics, Bishop Heber College at BHC during 06/06/2019 - 08/06/2019.
- # COLLEGE level FDP on **"Faculty Enrichment Programme"** Sponsored by Bishop Heber College, Organized by PG & Research Department of Physics at BHC during 19/11/2018 - 20/11/2018.
- # COLLEGE level on **"Hands-on Training on e-content Development"** Sponsored by Bishop Heber College, Organized by Deanery of Research & Development and IQAC at BHC during 12/07/2018 - 12/07/2018.
- # COLLEGE level FDP on **"Faculty Improvement Programme on Experimental Physics"** Sponsored by Department of Biotechnology, Organized by Department of Physics, BHC at Bishop Heber College during 12/02/2018 - 13/02/2018.
- # COLLEGE level on **"Capacity Building Workshop"** Sponsored by Bishop Heber College, Organized by IQAC, BHC at BHC during 14/07/2017 - 15/07/2017.
- # COLLEGE level on **"Faculty Empowerment Programme"** Sponsored by Bishop Heber College, Organized by IQAC, BHC at BHC during 14/06/2017 - 01/01/1900.

## RESOURCE PERSON - 2

1. College level Invited Lectures on **"Quantum Entanglement and its applications"** at SRIMAD ANDAVAN ARTS AND SCIENCE COLLEGE, Tiruchirappalli, 18/10/2021.
2. Regional level Invited Lectures on **"Application of Vectors in Electrodynamics"** at Chidambaram Pillai College for Women, Mannachanallur, 24/01/2019.

## JOURNAL REFEREE

1. **Reviewer** of International Journal *"Pramana"*(vol. ) at India during 18/07/2019 - Till Date.
2. **Reviewer** of International Journal *"Mathematical Reviews"*(vol. ) at USA during 19/09/2016 - Till Date.

@ LATEX Course instructor for the students pursuing PG Diploma in Advanced Scientific Interfacing.

**Signature of Staff**  
**(ANANTH N)**